

Inspiring Ways With **WHITEBOARDS**

One school's story of how to integrate IWBs into the curriculum you already have.
By Ron Schachter

When you step into Shari McBill's fourth-grade classroom in the half-century-old Thomas V. Nash, Jr. Primary School in Weymouth, Massachusetts, just south of Boston, it may look like the early 1960s all over again. With its brown-and-beige linoleum check-

erboard floor, old-style wall clock, and students sitting at attention with writing tablets and graph paper in front of them, not much seems to have changed from the days of Sputnik.

Not much, that is, until McBill turns on the ceiling-mounted projector pointed at the whiteboard in the

Plus 10
Real IWB
Ideas From
the Pros!

front of the classroom. That's when McBill and her 25 students, grouped around six tables, spring to life.

On a Friday morning in late spring, McBill launches the Drag and Drop Math section of the website MrNussbaum.com, which instantly appears on the whiteboard. With a couple

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of quick maneuvers, she posts the multiplication problem 900×71 , and her fourth graders calculate answers with marking pens on their own miniature whiteboards.

"Remember to check your work," McBill prompts, and from a flurry of raised hands she calls a student up to the whiteboard and gives her an infrared pen. "Sara, could you explain your process?" McBill asks. The youngster then uses the pen to move digits

projected on the left side of the board into their proper places underneath the problem on the right side. Whenever Sara drags a number that she intends to carry, it perches atop the next column.

As Sara drags and drops the product—63,900—McBill weaves among the tables, calling out, "Raise your hand if you have the correct answer."

"All three of you have different answers," she observes at one table, and those students promptly correct

their work. The class runs through a half dozen more multiplication problems, each with a different infrared-pen-wielding student at the front of the room.

"Now, who remembers how to find perimeter?" McBill asks, as her students reach for their geometry boards and she navigates to an interactive geoboard on the site Math Playground. The online version consists of parallel rows of equally spaced dots, on which McBill stretches virtual rubber bands in an assortment of colors to render the identical triangles and rectangles her students are forming with real rubber bands on their plastic boards.

One after another the students come forward to manipulate the interactive geoboard, changing dimensions and highlighting different sides of the shapes, as McBill peppers them and their classmates with questions.

"Is it easier to find the perimeter by counting the individual units or by using the formula?" she asks one student, who has just created a rectangle four units long by two units wide. "How many square units is that?" She turns to the class. "Eight," a chorus replies. "Now who can tell me another name for rectangle?" she asks next.

"It's amazing what you can find to teach a particular topic," McBill says after class. "In the past, you would hold a board and use rubber bands yourself to make the shapes. This way, the students are up there demonstrating their learning by moving numbers around and grouping them."

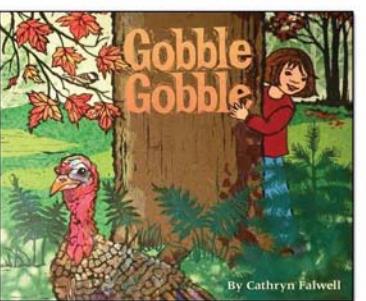
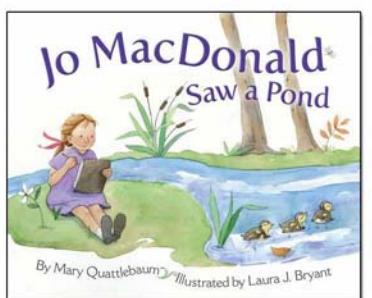
1

Try This Idea

As students brainstorm, write their ideas on the IWB and then have them group ideas by dragging and dropping text.

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2

Try This Idea
Teach about far-off places. Bring up Google Earth on your IWB and your students are there in an instant.

Next-Stage Boards

The actual whiteboard on which students are performing these feats isn't even interactive. The clicking, manipulating, and marking up of anything that appears there is made possible by an interactive system consisting of a projector and infrared pen that communicates with it. The system can turn any flat area—even walls—into interactive surfaces.

This new technology cuts Weymouth's cost of interactive whiteboards by about half. In the past, the district's elementary classrooms had to share roving IWBs, which were wheeled in as needed. Now Weymouth is midway through a three-year rollout of the projectors to all second- through fourth-grade classes across the district, no sharing required.

As a result, Weymouth's elementary classrooms are witnessing a flood of creativity on the part of elementary teachers here, and a torrent of student excitement. Educators like McBill and fellow fourth-grade teacher Linda Godbout develop their own interactive lessons around a host of websites, many of them free.

The Best Sites

McBill turns regularly to Global Classroom, which links to hundreds of sites covering all subject areas. She also makes regular use of the district's subscriptions to BrainPOP, Discovery Education, and SpellingCity.

"People don't realize how much is truly there," McBill says, cautioning that teachers who scan the Web for appropriate sites need to be wary of those that are too game-oriented rather than educational.

"It can be overwhelming at first," notes Godbout, who has woven Web-based lessons into daily classroom life. "But you can find so much by grade level, content area, and alignment to standards. It just opens up a whole new world. I use it for every subject."

Godbout, who teaches at Weymouth's Thomas Hamilton Primary School, has her students begin the day with a pencil-and-paper exercise from their language review books. Later on, they come forward to mark up and

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3

Try This Idea

Create multimedia presentations by recording students reading, and add the media files to the matching PowerPoint slides.



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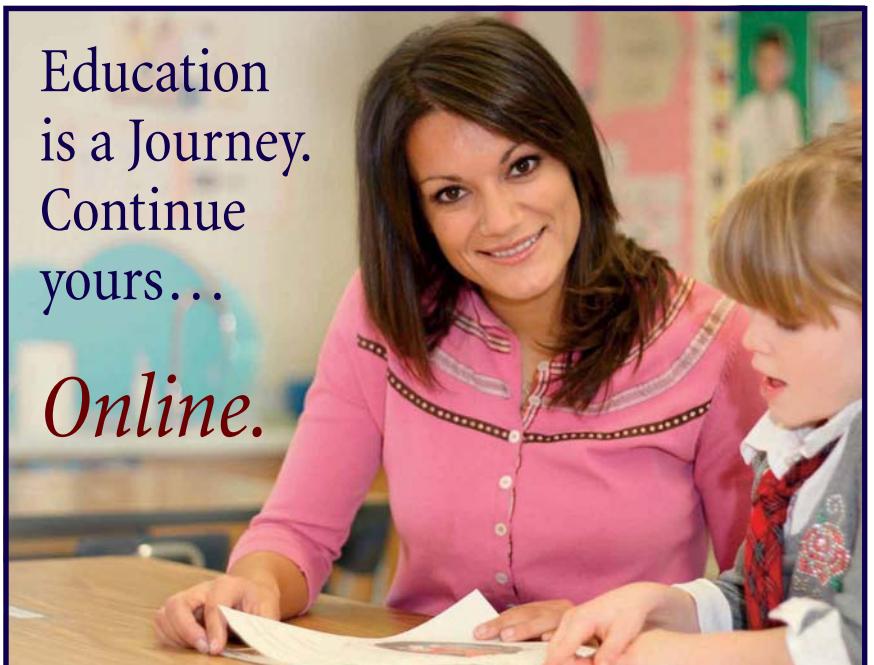
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manipulate the same exercise on the whiteboard as they practice skills from correcting grammar to identifying and using metaphors, similes, and analogies.

Godbout also has the entire class keep track of how many outside books they have read over the school year, separated into genres such as fantasy and realistic fiction. Using the Graph Club software program, they regularly

convert their growing tallies into bar and pie charts for all to see.

Online trips to the National Library of Virtual Manipulatives (nlvm.usu.edu) allow Godbout's students to interact with fractions, from representing them in bar graphs to demonstrating via manipulatives the effect of changing numerators or denominators. "They love coming up to the board," Godbout says. "Their hands shoot up."



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A HoverCam attached to Godbout's desktop computer allows her to convert documents and project them onto the whiteboard, where they can be marked up. This past year, she had her fourth graders study the Cinderella story by placing different versions side by side under the HoverCam. Then students wrote their own versions set in various regions of the United States, illustrated them, creating digital books by photographing the handmade pages with the HoverCam.

Using Windows Movie Maker, Godbout also recorded her students reading their stories and matched the narration to each book's pages, which could be turned accordingly as they were presented on the whiteboard. "They were very excited about it and were also very respectful of one another," Godbout recalls. "It got very quiet when stories other than their

own were being read."

Shari McBill has discovered another pedagogical benefit to using a school-issued video camera to record students reading the PowerPoint presentations that they create, and synchronizing voice and text. "Volume is always a problem," she says. The prerecording process, McBill explains, allows her to increase the volume levels as well as engage students with the multimedia production of their original work.

McBill launched a video on the Discovery website that reviewed animal classification. She then navigated to the free Animal Characteristics Game at Kid's Corner (sheppardsoftware.com) for a drag-and-drop exercise matching animal groups to their traits. A stream of students took turns using the infrared pen to grab terms such as gills and fur and place them in receptacles labeled "Fish" and

"Mammals," respectively.

"I liked the classifying because you could actually see what goes where," student Lexi Griffin said happily.

The interactive involvement does not end at the classroom door, McBill emphasizes, but continues for students during weekly visits to the computer lab and from home. McBill is quick to point out, though, that her new projector and infrared pen are tools in a



Try These Ideas

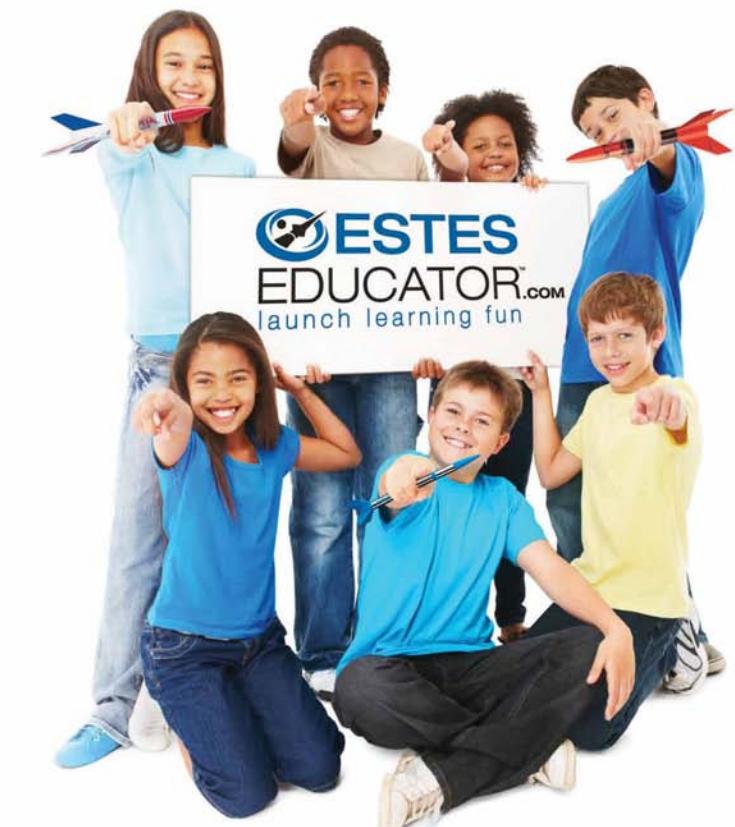
- Share a how-to video on your IWB to set up a hands-on science experiment.
- Combine student use of individual geometry boards with an interactive version on-screen at Math Playground.
- Visit the National Library of Virtual Manipulatives,

PHOTO: ISTOCKPHOTO

where kids can build cylinders and pyramids and cut wholes into fractions. Seven-eighths, anyone?

► When you have Back to School night, set up a game activity on your IWB. Most parents have never used them. Watch the grown-ups go crazy for whiteboard Jeopardy!

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larger educational process. "You can't use the whiteboard all the time," she cautions. "It's a great way to introduce and review lessons, but some people get stuck in projector mode. I find that you always have to have them doing something at their desks, always producing work."

Students are happily focused on their interactive experiences via projector and pen. "We use them a lot,"

Skyla Forgeron says. "Interacting with your studies that way is more fun and makes things easier to understand."

"When you go up there, everything seems more simple," she continues. "And you're doing all the work, not the computer. It makes you think more."

Classmate Owen O'Brien doesn't mince words in sealing the argument: "Would you rather read a bunch of stuff on paper or do it up there?" □

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8

Try This Idea

After playing simple math learning games with your students on the IWB, invite them to work in teams to invent their own math games, using drag-and-drop and other simple tools.



9

Try This Idea

Have your students create original stories or nonfiction essays and illustrations, then project them onto your IWB via HoverCam to produce an interactive book.

10

Try This Idea

Put a badly written but funny passage of text on the board and have your students edit it together. Each child makes just one change.